National Aeronautics and Space Administration


# Managing External Relations – *The Lifeblood of Mission Success*

## NASA Program Managers Challenge

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# Agenda

- **Customers and Stakeholders**
- **Agency Transformation**
- **Overview: Projects and Programs Experience**
- **An Approach to Project Success:**

  *Communicate, Communicate, Communicate*

# Customers and Stakeholders

- Astronauts
- NASA Centers
- NASA HQ
- Congress
- Media
- Professional Organizations (AIAA, etc.)
- Advocacy Groups (NSS, etc.)
- The Public

Johnson

Marshall

Glenn

Goddard

Stennis

Ames

Langley

MAF

Kennedy

JPL

Dryden

AIAA

National Space Society

Pratt & Whitney
A United Technologies Company

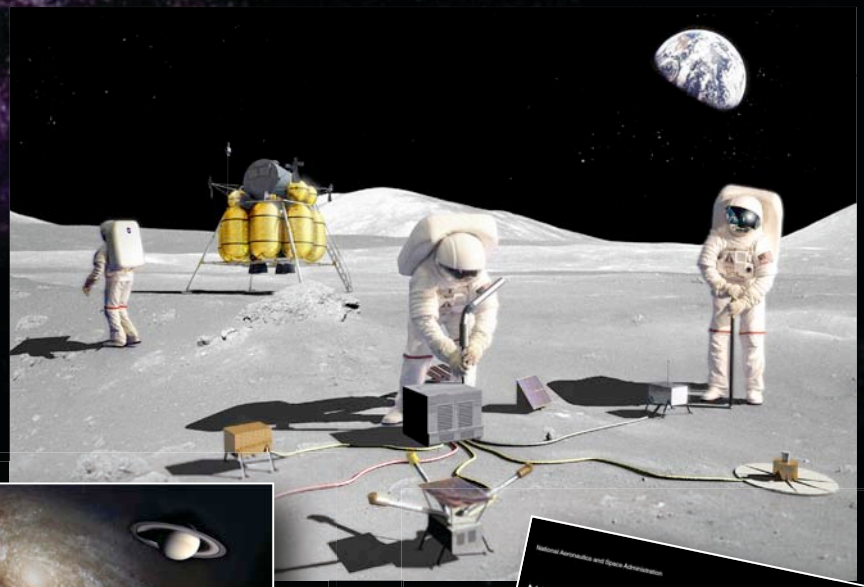
ATK
ALLIANT TECHSYSTEMS

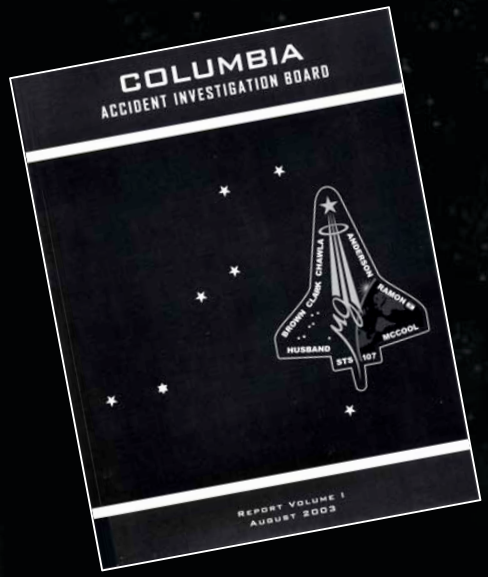
LOCKHEED MARTIN

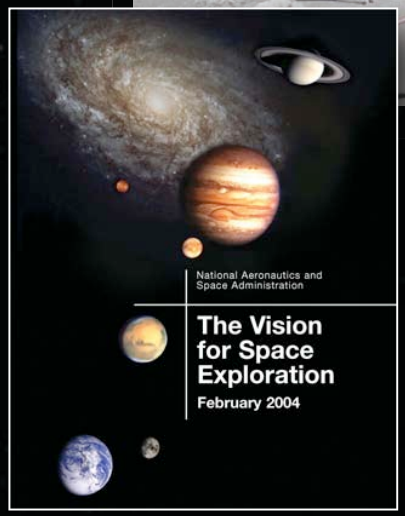
***External Relations Take Many Forms, Including Some That May Not Be Obvious.***

# Agency Transformation: Vision for Space Exploration

- Political Environment
- Management Philosophy
- Technical Focus







***Current Climate is Supportive. Change is a Constant.***

# Overview: Projects and Programs Experience


- Space Shuttle Main Engine
- DC-XA Flight Demonstrator
- X-33 Flight Demonstrator
- Space Launch Initative/2nd Generation Reusable Launch Vehicle
- X-37 Flight Demonstrator
- Constellation (pre Dr. Griffin)
- Safety & Mission Assurance
- Exploration Launch Projects

***Drawing on Extensive Lessons Lived… and Learning New Ones.***

# Space Shuttle Main Engine System

- **Positions:**
  - Performance Analyst, 1981
  - Alternate Turbopump Chief Engineer, 1987
  - Technology Test-Bed Manager, 1989
  - Shuttle Program/SSME Project Office Manager, 1991-94

- **Technical Accomplishments:**
  - Assessed Hardware
  - Supported Real-Time Launch Decisions
  - Integrated Technical Concepts
  - Initiated Test Activities
  - Developed Project Plans/Resource Requirements

**Management Lesson:**
***Learn how to work with other members of the team.***

# DC-XA Flight Demonstrator

- **Positions:**
  - Chief Engineer, 1994
  - Manager, 1995

- **Technical Accomplishments:**
  - Developed and Tested New Launch Vehicle Technologies
  - Exceeded Technical Requirements (2 Flight Tests in 26 Hours)
  - Completed Flight Tests on Schedule; Under Ran Budget by 10%

**Management Lesson:**
***Recognize that there are customers and stakeholders outside of your home Center, such as NASA HQ and the Media.***

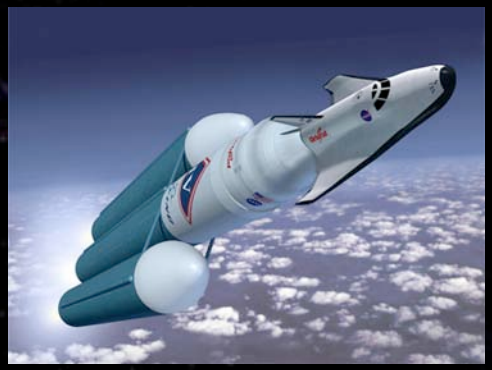
# X-33 Flight Demonstrator Program

- **Position:**
  - Deputy Manager, 1996

- **Technical Accomplishments:**
  - Developed Concept to Critical Design Review
  - Demonstrated New Launch Vehicle Technologies
    - Metallic thermal protection system
    - Aerospike engine
    - Composite structures

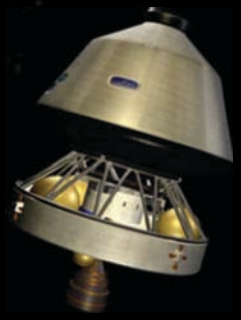
**Management Lesson:**
***Partnerships are tough and depend on how you do things.***

# Space Launch Initiative/2nd Generation Reusable Launch Vehicle Program



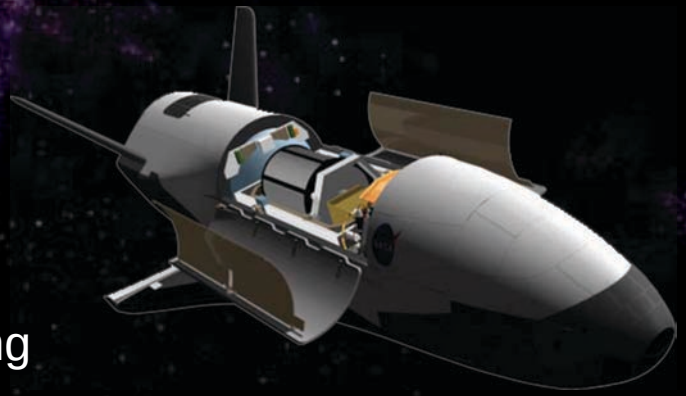
- **Position:**
  - Manager, 2000
  - Deputy Manager, 2001

- **Technical Accomplishments:**
  - Developed multi-Center/Agency Team
  - Chaired Source Evaluation Board for $1B Procurement
  - Developed Acquisition Strategies
  - Implemented Earned Value Management
  - Served as NASA Lead for Joint NASA/Air Force Study



**Management Lesson:**
***Vision must come before mission, or else a jobs program for Centers.***

# X-37



- **Position:**
  - Manager, 2003
- **Technical Accomplishments:**
  - Performed Comprehensive Project Planning
  - Established Baseline
  - Documented Lessons Learned
  - Team put project on track to flight test
  - Transitioned effort to DARPA partner

**Management Lesson:**
***Small design details can get MAJOR senior management attention.***

# Constellation
*(Pre Dr. Griffin)*


- **Position:**
  - MSFC Core Alignment Team, 2004
  - Exploration Systems Project Constellation (HQ), 2004

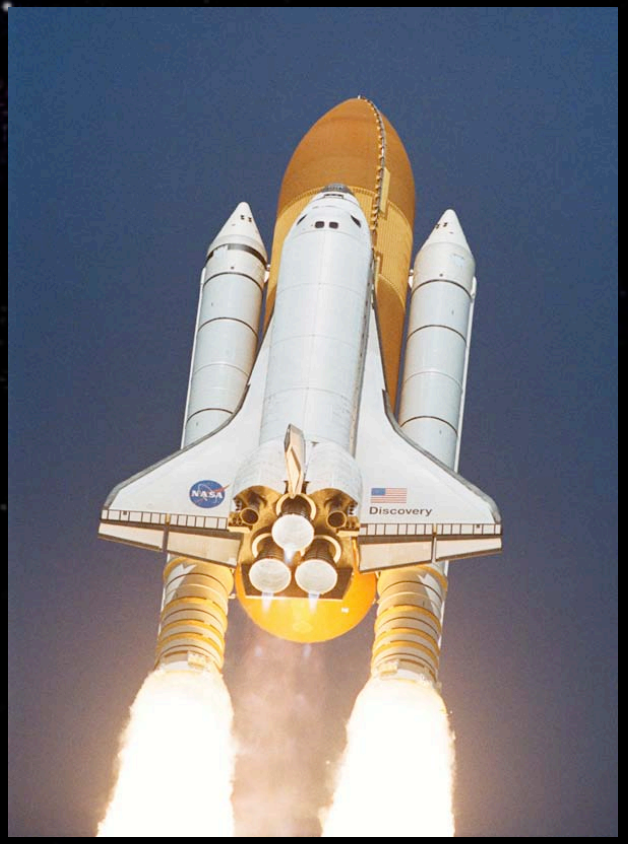
- **Technical Accomplishments:**
  - Participated in Major MSFC Reorganization
  - Initiated Project Constellation Systems Engineering and Integration Activities

**Management Lesson:**
***Be willing to do the "right" thing.***

# Safety & Mission Assurance

- **Positions:**
  - Deputy Director for Program Assurance, 2004
  - MSFC Assistant Ombudsman, 2004

- **Technical and Programmatic Objectives:**
  - Return the Shuttle to Safe Flight
  - Ensure Shuttle Propulsion Efforts Deliver Technical Excellence




**Management Lesson:**
***Communicate in one language; be ready to interpret.***

# Exploration Launch Projects

- **Position:**
  - Deputy Director, 2005-Present

- **Technical and Programmatic Objectives:**
  - Developed a Nationwide Team
  - Performed Analysis Based on the Exploration Systems Architecture Study Point of Departure Designs
  - Completed Ares I Crew Launch Vehicle System Requirements Review
  - Completed Ares V Cargo Launch Vehicle Design Analysis Cycles


**Management Lesson:**
***Understand and work toward the "win/win"; look for solutions beyond the challenge.***

# An Approach To Project Success: Communicate, Communicate, Communicate


## *Effectively Managing the Breadth of External Relations Is Imperative.*

- Define and Manage Requirements
- Add Value to Create Traction and Momentum
- Reduce Technical and Programmatic Risks
- Keep Resources Flowing
- Promote Mission Success
- Always Do the Right Thing and Make Sure to Communicate With Customers
- Understand Where to Be Flexible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